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ABSTRACT

The effects of a new curriculum, introduced at Hiram College in 1969, which emphasized interdisciplinary studies, increased freedom and responsibility, and eliminated traditional graduation requirements in favor of nondepartmental courses, more electives, and more individual faculty attention for freshman, were studied. The research strategy was to compare the development during college of old and new curriculum students in the areas of (1) satisfaction with various aspects of the college; (2) intellectual, social, and emotional attitudes and values; and (3) academic achievement in English and in traditional general education fields. The data were collected over a three-year period, using the 9-item Satisfaction with Hiram Scales, the Omnibus Personality Inventory (OPI), CEEB English Achievement, and five Survey of College Achievement scales. Three freshman groups, one old curriculum and two new curriculum, were tested for satisfaction and English achievement before and at the end of the freshman year. In addition, attitude and achievement scores of the last group to spend two years under the old curriculum were compared with corresponding scores of the first group to finish two years under the new program. Only standards admissions data were available as input measures for the old curriculum students. Study results showed that: there was significantly less disillusion and more year-end satisfaction with the new program among freshmen; new program sophomores were higher than the old on several OPI "intellectual" disposition scales and felt better adjusted than did the old group; new program freshmen scored higher on English achievement than did the old group; and new group sophomores scored as high as the old in five traditional academic areas. (See ED 059 695 for study final report.) (DB)

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## ABSTRACT

Effects of a Less Prescriptive, Student-Centered College Curriculum on Satisfaction, Attitudes and Achievement

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In 1969 Hiram College launched a new curriculum which emphasized interdisciplinary studies and increased student freedom and responsibility. All traditional, discipline-oriented graduation requirements were eliminated in favor of new nondepartmental courses, more electives, and more individual faculty attention for freshmen.

During the first two years of the new program there was significantly less disillusion and more end of freshman year satisfaction with the faculty, courses, advisers, and graduation requirements. Generally higher sophomore, senior and faculty satisfaction was also found.

New curriculum sophomores were higher than the old on several OPI "intellectual" disposition scales (e.g., thinking introversion, theoretical orientation, complexity, and autonomy). In addition, the new curriculum sophomores felt that they were better adjusted and less anxious than the old curriculum sophomores.

New curriculum freshmen scored higher on English achievement, relative to their high school senior scores, than the old curriculum group which had had the presumed advantage of two terms of college English. In spite of the absence of disciplinary graduation requirements, the new curriculum sophomores scored as high as the old in five traditional academic areas.



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# Effects of a Less Prescriptive, Student-Centered College Curriculum on Satisfaction, Attitudes and Achievement[1]

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A recent major curricular change at Hiram College provided an opportunity to gather evidence about the extent to which a rather typical liberal arts college could change the impact it was having on student development, without substantial changes in the types of student enrolled or in the composition of the faculty.

When it began in 1969, the Hiram program provided students, especially freshmen, more freedom and responsibility than was typical at most colleges. Table 1 provides a comparison of the requirements of the old and the new curricula. Perhaps the most salient feature of the new curriculum was the elimination of all of the usual, general, discipline-oriented graduation requirements, which at most colleges occupied the bulk of the students' first two years. At least half of a new curriculum student's freshman and sophomore courses were electives and the remainder were non-traditional, interdisciplinary courses among which he had considerable choice. Most of the new courses were ungraded and placed heavy emphasis on class discussions and personal position papers. None resembled the usually required laboratory science, foreign language or

[1]This is the text of a paper presented at the American Psychological Association on September 3, 1972. The data were collected, while the author was on the faculty of Hiram College, with the partial support of a grant from the Office of Education, OEG-5-70-0018 (509).

mathematics courses.[2]

Table 2 shows the design of the study. The research strategy was to compare the development during college of old and new curriculum students in the three broad areas of: 1) satisfaction with various aspects of the college; 2) intellectual, social, and emotional attitudes and values; and 3) academic achievement in English and in the traditional general education fields.

The data were collected over a three year period between September, 1968, the beginning of the last year of the old curriculum, and May, 1971, the end of the second year of the new curriculum. Three groups of freshmen, one old curriculum group (which entered in 1968) and two new curriculum groups (which entered in 1969 and 1970) were tested for satisfaction and English achievement before and at the end of the freshman year. In addition, attitude and achievement scores of the last group (the 1967 entrants) to spend two years under the old curriculum were compared to corresponding scores of the first group (1969 entrants) to finish two years under the new program. Unfortunately, since the study was not begun until the last year of the old curriculum, (the fall of 1968) only standard admissions data (SAT's and high school percentiles) were available as input measures for the 1967 entrants.

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[2]Somewhat more complete descriptions of the curriculum and analyses of the relative success of the various components of it have been published several places (see Morgan 1971 a, b and c). Complete unpublished reports to the National Endowment for the Humanities, who partially supported the first three years of the program should be available for loan from the Hiram College Library and/or from NEH in Washington, D.C. (Grant numbers H69-0-121 and EO-93-70-4178). The complete final report to the Office of Education for their support of this research can be obtained from the ERIC Document Reproduction Service, Post Office Drawer O, Bethesda, Maryland 20014. (ED 059695--Microfiche, $ .65; xerox, $3.29, 82 pp.)

The general procedure was to write a letter to each of the students in a class explaining the importance of the study and explaining that they were expected to participate at a certain place and time. The percentage of the total number of students with useable data ranged from 65 to 98, depending on the instrument, with a median of 84 percent. In general, participation was highest for entering freshmen and lowest for sophomores.

Table 3 shows the results of students' responses to the Satisfaction-with-Hiram Scales. These nine-item, local rating scales measured either expected satisfactions of entering students or actual satisfactions at the end of the freshman year. The "expected" and "actual" scales were identical except for the wording of the instructions. Respondents were asked to rate each aspect of the College on a six-point scale, from 1 for very dissatisfied to 6 for very satisfied.

You can see from columns one and three that expected satisfaction with Hiram scores were generally high for both old and new curriculum entering freshmen. New curriculum entrants did expect to be more satisfied with the graduation requirements and courses, but did not expect to be more satisfied with the faculty, adviser, administration or courses. At the end of the freshman year, new curriculum students were more satisfied with all six of these aspects of Hiram, but not with the social life and facilities.

More importantly, as you can see from the last two columns of Table 3, there was significantly less freshman disillusion (that is negative change) with the academic program under the new curriculum. This was especially the case on ratings of satisfaction with the faculty, advisers, and courses. On the other hand, disillusion with the town, social life and facilities was considerable under both curricula, and not significantly different under the new from what it had been under the old.

Table 4 shows that the new curriculum sophomores scored significantly higher than the old group on four out of the six Omnibus Personality Inventory "intellectual disposition" dimensions (i.e., Thinking Introversion, Theoretical Orientation, Complexity and Autonomy), but there was no difference between the groups on the other two "intellectual" dimensions (Estheticism and Religious Liberalism). New curriculum students were also lower on Practical Outlook, which is usually inversely related to the intellectual disposition categories. In addition, the new curriculum sophomores were higher on Personal Integration and lower on Anxiety.

Table 5 shows that new curriculum students who took the CEEB English Achievement test both in high school and at the end of their freshman year showed more improvement than did the corresponding old curriculum group, which had had the presumed advantage of two terms of Freshman English courses.

Table 6 indicates that when high school percentile and SAT scores were used as covariates in multivariate analyses of covariance, the only significant difference on the five Survey of College Achievement scales was that the new curriculum sophomore mathematics score was higher.

The many methodological difficulties inherent in field studies make one cautious about inferring that the new curriculum was the cause of even those differences in which greater change during college was demonstrated. Factors such as the "Hawthorne Effect," non-curricular differences on the campus, and differences in the cultural milieu may have produced at least part of the effect. These possibilities cannot be denied, but several counter-considerations should be mentioned.

First, students entering Hiram during this period were quite similar on a wide range of variables, including expected satisfactions, OPI attitude scales, achievement and aptitude scores. Second, since the first new curriculum group continued their relatively higher satisfaction at least through the sophomore year, a short term elation effect could not have been the major factor. Neither could a generalized halo effect have been a key factor because the higher satisfaction (and lower disillusion) scores were concentrated on the academic rather than the social aspects of the college. Third, although attitudinal development was no doubt influenced by cultural changes, the measures were taken only two years apart (1969 and 1971), and reflect development during similar periods of student ferment. Finally, the use of traditional academic achievement tests to measure learning under the

more attitude- and value-oriented new program would seem to have biased the results against the new curriculum. Yet achievement was at least as high.

Although each result by itself has to be considered tentative, the combined results of higher satisfaction with the academic program, stronger intellectual values, better feelings of adjustment, and equal or better academic achievement, strengthen the overall conclusion that a less prescriptive, more student-centered curriculum can contribute to increased student development. This study seems to indicate that how things are done at college can make a difference and it should provide encouragement to educators who hope to make academic changes of this type.

## References

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TABLE 1

## Comparison of the Number of Courses Required for Graduation in the Old and New Hiram College Curricula

| Old Curriculum (through 1968-1969) | | New Curriculum (1969-1970 and after) | |
|---|---|---|---|
| | **General Requirements in Courses** | | |
| 2 | Freshman English | ½ | Freshman Institute (communications workshop and orientation to the curriculum) |
| 1 | Literature | | |
| 4 | Foreign Language | | |
| 1 | Fine Arts | 2 | Freshman Colloquia (small seminars on various topics) |
| 1 | Religion | | |
| 4 | Social Science | 3 | 20th Century Course (large lecture and film course on major issues of 20th Century) |
| 3 | Natural Science | | |
| 1 | Mathematics | | |
| 1 | Senior Liberal Studies | 3 | Interdisciplinary Courses (topical, often team taught courses in science, social science, arts and humanities) |
| c. 18 | | c. 8½ | |
| | **Major Concentration and Electives** | | |
| c. 10 | Major Field | c. 17 | Area of Concentration |
| c. 3 | Required for Major | | |
| c. 5 | Electives | c. 11 | Electives |
| c. 18 | | c. 28 | |
| 36 | Total for Graduation | 36 | Total for Graduation |

TABLE 2

Schematized Design of the Major Elements of the Evaluation of the New Hiram College Curriculum

| Instrument and Time of Administration | Old Curriculum | | New Curriculum | |
|---|---|---|---|---|
| | Entered Hiram in Sept. 1967 | Entered Hiram in Sept. 1968 | Entered Hiram in Sept. 1969 | Entered Hiram in Sept. 1970 |
| **Satisfaction with Hiram Scale** | | | | |
| Beginning of Freshman Year | | X | X | X |
| End of Freshman Year | | X | X | X |
| **Omnibus Personality Inventory** | | | | |
| End of Sophomore Year | X | | X | |
| **CEEB English Achievement** | | | | |
| Senior Year in High School | | X | X | X |
| End of Freshman Year | | X | X | X |
| **Survey of College Achievement** | | | | |
| End of Sophomore Year | X | | X | |

TABLE 3

Multivariate Analysis of Variance of the Mean Changes of Old and New Curriculum Freshmen from Expected Satisfaction at Entrance to Satisfaction near the End of the Freshman Year

(six point scale from 1, very dissatisfied, to 6, very satisfied)

| Satisfication with | Old Curriculum Freshmen | | New Curriculum Freshmen | | Net Differences Between Old & New Changes | F Values |
|---|---|---|---|---|---|---|
| | Fall | Spring | Fall | Spring | | |
| Faculty | 5.23 | 4.32 | 5.28 | 5.03 | + 0.71 | 68.50** |
| Administration | 5.10 | 4.20 | 5.10 | 4.47 | + 0.27 | 8.51** |
| Students | 4.96 | 4.10 | 4.95 | 4.41 | + 0.32 | 11.84** |
| Town of Hiram | 4.04 | 3.54 | 4.37 | 3.84 | − 0.03 | 0.01 |
| Requirements | 4.39 | 4.32 | 4.95 | 4.76 | − 0.12 | 1.12 |
| Adviser | 5.20 | 4.28 | 5.08 | 4.69 | + 0.53 | 17.51** |
| Social Life | 4.21 | 3.58 | 4.48 | 3.79 | − 0.06 | 0.16 |
| Facilities | 5.07 | 4.46 | 5.13 | 4.43 | − 0.04 | 0.02 |
| Courses | 4.79 | 3.92 | 5.04 | 4.55 | + 0.38 | 14.21** |

*$p < .05$ (df = 1/697)
**$p < .01$ (df = 1/697)

TABLE 4

Multivariate Analysis of Variance for the Mean Standard Scores of the Old and New Curriculum Sophomores on the Omnibus Personality Inventory (OPI)

| | Old Curriculum May 1969 | New Curriculum May 1971 | Differences (1971-1969) | F Values |
|---|---|---|---|---|
| Thinking Introversion | 48.3 | 51.1 | + 2.8 | 5.95* |
| Theoretical Orientation | 46.7 | 50.0 | + 3.3 | 7.62** |
| Estheticism | 51.5 | 52.1 | + 0.6 | 0.34 |
| Complexity | 52.6 | 56.0 | + 3.4 | 6.43* |
| Autonomy | 56.1 | 58.5 | + 2.4 | 5.52* |
| Religious Liberalism | 56.0 | 55.7 | − 0.3 | 0.13 |
| Social Extroversion | 45.6 | 45.7 | + 0.1 | 0.02 |
| Impulse Expression | 55.6 | 55.6 | 0.0 | 0.00 |
| Personal Integration | 48.9 | 51.4 | + 2.5 | 4.83* |
| Lack of Anxiety | 47.5 | 50.0 | + 2.5 | 4.97* |
| Altruism | 49.3 | 50.8 | + 1.5 | 1.89 |
| Practical Outlook | 47.1 | 42.8 | − 4.3 | 15.81** |
| Femininity-Masculinity | 47.0 | 45.9 | − 1.1 | 1.00 |
| Response Bias | 45.1 | 48.6 | + 3.5 | 10.56** |

*$p < .05$ (df = 1/292)
**$p < .01$ (df = 1/292)

TABLE 5

## Analysis of Variance for the Mean Change in CEEB English Achievement from High School to College for New and Old Curriculum Freshmen Who Took Both Tests

| | Old Curriculum | New Curriculum | F Value |
|---|---|---|---|
| High School Score | 543 | 529 | |
| College Score | 534 | 541 | |
| Mean Change | −9 | +12 | 8.64** |

**$p < .01$ (df=1/249)

TABLE 6

Multivariate Analysis of Covariance for the Mean Standard Scores of Old and New Curriculum Sophomores on the Survey of College Achievement (SCA)

| | Old Curriculum Sophomores (May 1969) | New Curriculum Sophomores (May 1971) | Differences (1971-1969) | F Values Adjusted for Covariates |
|---|---|---|---|---|
| **Covariates** | | | | |
| High School %ile | 76 | 72 | − 4.0 | |
| SAT Verbal | 527 | 512 | − 15.0 | |
| SAT Math | 549 | 544 | − 5.0 | |
| **SCA Scales** | | | | |
| English Composition | 51.7 | 50.3 | − 1.4 | 0.07 |
| Humanities | 54.8 | 52.6 | − 2.2 | 2.18 |
| Social Science | 52.5 | 52.3 | − 0.2 | 0.47 |
| Natural Science | 52.4 | 50.8 | − 1.6 | 1.51 |
| Mathematics | 50.9 | 52.3 | + 1.4 | 4.92* |

*$p < .05$ (df=1/297)